REPORT RESUMES

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A SOCIAL PSYCHOLOGICAL ANALYSIS OF THE TRANSITION FROM HOME TO SCHOOL. FINAL REPORT.
BY- SECORD, PAUL.
NEVADA UNIV., RENO
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THE TRADITIONAL VIEW THAT A CHILD'S INTELLECTUAL ACHIEVEMENTS DEPEND PRIMARILY UPON GENETIC PREDISPOSITIONS IS NOW BEING SUPERSEDED BY THE IDEA, SUPPORTED BY MANY RECENT STUDIES, THAT THE FACTORS OF ENVIRONMENT AND EXPERIENCE PROFOUNDLY AFFECT PERFORMANCE ON MENTAL TASKS AND SUCCESS IN THE EDUCATIONAL SYSTEM. THE SOCIOECONOMIC LEVEL OF THE PUPIL IS AN IMPORTANT INFLUENCE ON A CHILD'S INTELLECTUAL DEVELOPMENT BECAUSE IT DETERMINES, FOR THE MOST PART, THE ENVIRONMENT AND TYPES OF EXPERIENCES A PUPIL WILL HAVE. TWO TYPES WHICH ARE OF PARTICULAR IMPORT ARE (1) THE QUALITY OF PRESCHOOL EXPERIENCE AND (2) THE QUALITY OF EARLY EXPERIENCE IN THE PRIMARY GRADES. IN OTHER WORDS, THE TYPE OF FAMILY A CHILD IS A PART OF (ITS ATTITUDES AND AMBITIONS) AND THE TYPE OF SCHOOL HE FIRST ATTENDS MAY SIGNIFICANTLY INFLUENCE HIS LATER LEARNING ACHIEVEMENTS. BOTH THE TYPE OF FAMILY LIFE AND TYPE OF EARLY SCHOOLING A LOWER CLASS CHILD EXPERIENCES CAUSES HIM TO BE BEHIND HIS UPPER CLASS PEERS IN INTELLECTUAL DEVELOPMENT AND TO REMAIN BEHIND THEM. THE MODERN TREND OF SCHOOLS TOWARD ABILITY GROUPING, THAT IS, SEPARATING THE GOOD STUDENTS FROM THE POOR STUDENTS, MAY ALSO CONTRIBUTE TO HALTING OR DISCOURAGING THE MENTAL DEVELOPMENT OF STUDENTS WHO ARE BEHIND THE OTHERS. ABILITY GROUPING MAY ADVERSELY AFFECT TEACHER ATTITUDES TOWARD LOWER-ABILITY GROUPS AND MAY DEPRESS THE MORALE OF SUCH GROUPS. (WD)

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A SOCIAL PSYCHOLOGICAL ANALYSIS OF THE TRANSITION FROM HOME TO SCHOOL

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Secord, Dr. Paul
University of Nevada

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Section I

PRESCHOOL SOCIALIZATION OF THE CHILD

In recent years, increasing importance has been attached to the preschool experiences of the child as determiners of his success in school. In part, this is due to revolutionary and still controversial changes in our thinking that have occurred during the last two decades concerning the development of the child and the nature of mental abilities. No longer do we think of mental abilities as fixed endowments, nor do we think of development as an unfolding process governed overwhelmingly by maturation. Instead, our view is that the structure of the environment and the nature of experience profoundly affects the mental development of the child (Hunt, 1961). Some elaboration of this view provides a useful orientation.

For the greater part of the twentieth century thinking about educational achievement has been dominated by certain conceptions that in recent years have been subjected to vigorous attack. Foremost among these traditional views is the firm belief that individuals are endowed by their genetic inheritance with a native capacity for general intellectual achievement that has very narrow limits and that cannot be modified by learning experiences. A part of this belief is the conception that the intellectual ability of a child relative to other children of his age is virtually constant at different ages, and that his IQ at a late age can be easily predicted from his IQ at an early age. Similar beliefs are held with respect to more specific aptitudes that may be regarded as components of intelligence, such as verbal fluency, spatial relations, reasoning ability, or special aptitudes such as artistic or musical talent.

At the present time these beliefs are no longer universally held; it is recognized that no adequate proof exists for them. Moreover, longitudinal studies of the intellectual development of the same child over a period of many years have demonstrated that considerable changes in intellectual performance relative to other children of the same age do occur. In addition, studies of animals placed in a severely restricted environment and intensive studies of children are leading to a profound reconceptualization of the nature of intelligence and general aptitudes.

At one time, if a child was failing in school, it was customary to administer an intelligence test and, if he was shown to have a low score, simply to suggest that he was doing poorly because he had low (native) intelligence. While this practice may still occur more frequently than it should, it is clear today that such an explanation of poor academic performance is far from adequate. The customary distinction between general intelligence tests and tests of educational achievement has become blurred. Intelligence tests were once thought to measure something close to native capacity or potential, and achievement tests to measure present level of performance; today it is no longer clear that each is measuring something different from the other. More nearly correct is the view that both are measuring a particular kind of performance and nothing more.

The contemporary point of view taken by an outstanding authority on individual differences and psychological tests concerning the measurement of "capacity" is instructive:

"Another area of psychology in which confusions regarding heredity and environment are likely to arise is that of the interpretation of psychological tests. Persons unfamiliar with the way in which psychological tests are developed and used sometimes expect such tests to measure "native intelligence," "innate capacities," "hereditary predispositions of personality," and the like. By now it should be apparent that such expectations are sheer nonsense.

"Between the biochemical properties of genes--which constitute the individual's heredity--and the complex functions subsumed under the headings of intelligence and personality there intervene a vast number of steps. At each step there occur intricate interactions involving environmental conditions--past and present-- as well as any relevant indirect effects of specific genes. The end product reflects a multiplicity of influences, structural and functional, hereditary and environmental.

"Every psychological test measures a sample of the individual's behavior. No test provides any special devices or "tricks" for penetrating beyond behavior or for eliminating the subject's past experiences. All conditions influencing behavior will inevitably be reflected in test scores. In so far as performance on a given test correlates with performance in other situations, the test can serve in diagnosing or predicting behavior. It is in this sense only that a psychological test can be said to measure "capacity" or "potentiality."

"For example, we may be able to construct a test that will predict how well high school freshmen can learn French, before they have even begun the study of French. We would thus be testing the student's capacity for learning French rather than his present knowledge of the language. Such capacity, however, would be tested by determining how well the individual performs certain necessary prerequisite functions and how effectively he learns vocabulary and grammatical rules similar to those he will be taught in French classes. In other words, we would use the students' present performance in relevant tasks to predict how well each would do when taught a new language.

"It is well to remember that whenever the terms "capacity" and "potentiality" are employed in reference to psychological tests, they are to be interpreted in the above sense of prediction. No psychological test measures genes! To ask that it do so simply reflects a misconception of the nature of heredity and of its role in behavior." [Anastasi, 1958, p. 82]

The above quotation makes clear that tests and other types of psychological measurement are simply devices for describing in quantitative terms a sample of the individual's behavior. Typically through the use of the correlation coefficient, such measurements may be used to predict educational achievement or performance on a job. Correlations are high and predict with reasonable accuracy if persons who perform well on the measure also perform well in school, and those who perform poorly on the test do poorly in school. Correlations are low and of little predictive value when the performance of each individual on the test has little relation to his achievement in the school situation.

Even substantial correlations between educational achievement and a particular aptitude or personality trait, however, are subject to several different interpretations. First and most common is the view that abilities, traits, habits, attitudes, or behavioral patterns, once formed, are somewhat autonomous, and persist from situation to situation. From this point of view an individual with certain personality characteristics is seen to succeed in school because these traits facilitate his academic performance. Thus, the direction of causation is from an intra-individual variable to academic performance. Elsewhere, however, the present writers (Secord & Backman, 1961) have stressed that traits and attitudes, once established, do not persist merely of their own accord, but rather, if they are to remain stable, the social environment must be structured so as to maintain them. While this cannot be regarded as a generalization fully supported by unimpeachable data, the converse generalization favoring traits and habits as causal determinants is equally difficult to prove.

A second view of associations between intra-individual characteristics and academic performance is opposite to the first: academic performance may to some degree shape the personality of the child in an appropriate direction. For example, a child who starts out well in school may respond by increasing his interest in reading and other intellectual activities which in turn will give him a somewhat higher score on a personality test of introversion. Even more obvious is the possibility that appropriate attitudes toward school subjects may be the result rather than the cause of good performance in school.

A third view is that both the cognitive abilities and the personality traits later found to be associated with academic performance have developed concurrently with the various specific skills that comprise good or poor performance. This is well expressed by Robinson (1965), who examines the relations between achievement motivation, intelligence test scores, and performance in the grammar school selection tests at age eleven in Great Britain. He notes that a child's experiences of success and failure in academic work in primary school are related to intellectual ability as well as to the amount of effort expended. The intelligent child will experience more success, and thus is encouraged and rewarded, increasing the strength of the achievement motive, which in turn leads to more success. His empirical findings are consistent with this view. Measures of need achievement were found to correlate with intelligence. At the same time, each of these variables was shown to be independently associated with the performance of the child on the grammar school selection tests. Thus, in this third view the direction of causation is from experiences of success or failure to performance on intelligence _and_ personality tests, such as need achievement measures.

Probably all three of these viewpoints are correct in some instances; it is unlikely that just one of these interpretations is consistent with all of the facts. These three views are contrasted here to encourage keeping an open mind in interpreting the various findings to be reported. It is all too easy to assume that intra-individual variables are _causes_ of academic performance.

The contemporary view of the relation of abilities and personality traits to educational achievement sketched in the preceding pages elevates social psychological processes to a position of major importance. This view suggests that the educational performance of an individual at any stage is a function not only of his previous experiences with objects and ideas in his environment, but also of the nature of his previous interactions with persons. Further, contemporary social processes prevailing during the current assessment of his academic performance acquire significance. Traditional educational psychology has in the past given little attention to these matters. The present section will focus upon the home environment and the factors within it that appear to have the largest effect upon mental development and performance. Before dealing specifically with the home environment, however, the association between socioeconomic class and educational achievement will be reviewed and evaluated.

Education and Social Class

Social class is a sociological variable that has long been thought to have an important effect on educational achievement. The positions that people in any society occupy may be grouped in distinguishable classes, along a dimension from high to low. This continuum is thought of as multifaceted, representing both prestige and power, and sometimes other components. Most commonly occupation is used as a criterion for determining the social class to which a person belongs, but sometimes also given weight are income, education, residence, and family. In smaller communities, the relative class status of each resident may be judged subjectively by the people themselves, adding another facet to the social class dimension.

Social class may affect education in several ways. First, attitudes toward education held by parents and child will vary by social class. Second, the social class membership of the child will determine his family's residential location, and this in turn will determine the public school that he attends. Whether he has adequate or inadequate means for financing his later education also depends upon his social class membership. Finally, social class is important in another sense. The school system and its representatives, particularly the teacher and the counselor, reflect certain social class values, and consequently are apt to treat children from different social classes differently. Attitudes toward education will be discussed in the present section, and the other points, in Section 2.

Lavin (1965) has ably reviewed studies determining the relation between social class and academic performance. Most of these studies demonstrate that the higher a person's social class, the higher his level of academic performance. This holds for all educational levels, but some studies yield a negative relation for the upper social class levels, particularly with respect to college performance. Apparently the usual positive relation does not hold for this portion of the social class dimension. Several interpretations of this exception have been offered: (a) Upper-class students need only graduate to maintain their status, whereas middle-class students find college status-enhancing and strive for top performance (McArthur, 1954; Davis & Frederiksen, 1955; Davis, 1956); and (b) Upper-class students come to college from private schools having a more directed regimen, making it more difficult to adjust to the less structured college environment (Lavin, 1965).

Since intelligence as measured by standardized tests is known to be associated both with educational achievement and with social class (Lavin, 1965), it might be argued that the correlation between social class and educational achievement is simply an artifact of the association of each variable with intelligence. In two studies, when intelligence was controlled, the relation between social class and educational achievement dropped appreciably, but not to zero (Friedhoff, 1955; Knief & Stroud, 1956). This partial drop is consistent with the view that social class summarizes a group of variables, one of which is intelligence. The association remaining after intelligence is partialed out is accounted for by other factors associated with social class. This residual association is all the more important when it is considered that performance on intelligence tests themselves varies with social class, a fact that attenuates whatever association exists.

Educational values and their relation to occupational aspirations account in part for the relation between social class and educational achievement. Numerous studies of social class agree fairly well in suggesting that, in a general and abstract sense, education is universally valued among all social classes. For example, in a survey of attitudes of inhabitants of the Lower East Side of Manhattan in New York City, a slum area for generations, about 95% of all of the respondents stated that they thought that "a good education is essential to getting ahead" (Cloward & Jones, 1963). Furthermore, when asked what comes to mind when they think of a "good life" for boys and girls, more than half of the respondents mentioned education. Education was mentioned by as many lower-class persons as middle-class persons (there were no upper-class persons in the sample). An extensive survey directed by Coleman (1966) similarly finds little differences in educational aspirations among students of varying social backgrounds.

On the other hand, Hyman (1953) reported a question asked of a national sample: "About how much schooling do you think most young men need these days to get along well in the world?" The per cent of those recommending a college education differed markedly by class, as follows: wealthy and prosperous, 74%; middle class, 63%; lower class, 42%. Cloward and Jones explain that while lower-class persons in a general sense value education highly, they also realize that, for them, it is less apt to be a means to obtaining a good job. Respondents in their sample react like those in the national sample: lower-class persons less frequently state that a good education is essential to getting ahead. Cloward and Jones show further that this difference occurs because, in general, the occupational aspirations of lower-class individuals are lower. This represents a somewhat realistic perception of inequalities in job opportunities. Particularly where a lower-class person also belongs to a disadvantaged ethnic group (e.g., Negro) he will have a more difficult time finding employment opportunities equal to those found by middle-class persons who have a comparable education and who do not belong to a disadvantaged group. For example, Negro youths with college training are often employed in semi-skilled and lower white-collar positions because higher level jobs are not available to them in sufficient numbers. We may conclude that lower-class parents are less likely to provide vigorous support of their children's school activities, and are less apt to encourage their children to stay in school beyond the required minimum number of years.

Cloward and Jones note a number of other factors that impoverish the education of lower-class children. Teachers are reluctant to teach in slum area schools. Since they transfer out of such schools at a more rapid rate, such schools have a higher turnover. The vacancies created are most likely to be filled by newly graduated, inexperienced teachers, who have the least bargaining power in seeking a position (Becker, 1952). Naturally they are apt to be less skilled and less effective teachers. In addition, in such schools, a greater proportion of classroom and school activity is spent in organizational and disciplinary matters, reducing the amount of time devoted to instruction. One study of slum area schools found that from 50 to 80 per cent of the day was spent in disciplinary or organizational detail, and only 30 to 50 per cent in actual instruction (Deutsch, 1960).

Before we conclude, however, that the varying parental and student aspirations in different social classes partly account for differences in academic achievement, a counter-argument must be disposed of. Just as educational achievement is associated with intelligence, so are educational aspirations. Thus, it might be argued that the correlation between social class and educational aspiration is simply an artifact of the association of each variable with intelligence. This argument is refuted, however, by a study of high school seniors which shows that social class and educational aspiration are directly associated _even among individuals approximately equal in intelligence_ (Sewell, Haller, & Straus, 1957).

Brookover and Gottlieb (1963) note that, in certain ways, the influence of social class on educational achievement has been overemphasized in the older educational literature. They point out that, while social class certainly has some importance in the early school years, later years usually provide cross-class socialization of children. Most schools develop common norms and behavior patterns that cut across class lines. This gives the lower-class child an opportunity to move upward into a higher social class. Nevertheless, it should be kept in mind that a poor start in the preschool period and in the early grades, where social class may well have an effect, is apt to have enduring consequences for the later performance of the child.

When this initial poor start is considered along with recent findings in the United States and Britain to the effect that graded primaries produce even further differences among the segregated groups, the significance of social class for educational achievement is enhanced. The educational experiences of the children in the low ability groups cause them to learn at a slower rate, while the high ability groups are stimulated to learn at a more rapid rate. As each year passes, the gap between low ability and high ability children is widened. This tendency of early behavior patterns in school to persist into later years will be discussed further in Section 2, in connection with the social forces affecting the child's pattern of movement through various educational levels and grades.

Another widely recognized limitation of the social class dimension is that is represents only in a gross manner several more specific variables. These include such factors as the specific attitudes of the family toward education, its educational and occupational aspirations, the kind of intellectual environment it provides, the stress it places on striving to achieve success, and the forms of discipline and control used by the parents. Although these factors do vary in a rough way with social class they also vary considerably within class levels. A family at a particular social class level will rarely be at a point on all of these dimensions that corresponds to its social class position. Thus, a current research trend is to go beyond social class to examine relations between educational achievement and each of the specific variables associated with social class. If relations between these specific family variables and educational achievement can be determined, we will have a more precise understanding of the school performance of any particular child and also a better idea of what kinds of social action might improve the educational system. This type of analysis will be attempted in the following discussion, although the extent to which these specific factors do vary with social class will also be noted from time to time.

For example, we have already noted that as we move from lower to higher social strata, an increasing proportion of persons see education as a means of preparing for a desirable occupation. Families also vary within social class in the stress they place on education as a means to occupational success. For instance, among a group of 202 lower-class, Negro mothers with children in nursery school or kindergarten, those mothers who had less education and more children had lower aspirations for the number of years of education they expected their children to receive, lower occupational aspirations for their children, more frequently perceived a technical education as adequate, and less often saw hard work and ambition as a means to success (Bell, 1964).

We now turn to a consideration of family variables that might relate to success or failure in school. In order to assess the impact of the family on educational achievement, however, it is necessary to have a clear understanding of the values and behavior patterns that characterize the school situation. These will be described primarily for the elementary school situation, and modified later for high school and college.

Characteristics of the School Situation

Two aspects of the school situation are considered: (a) educational activities taking place primarily in the classroom, and (b) social interaction in the classroom and playground. While it is undoubtedly true that values and behavior patterns vary greatly from school to school, and even from one classroom to another within the same school, there are also certain widely shared values and virtually universal behavior patterns that are common to most public schools and classrooms in the United States.

Because of its size, the classroom group can accomplish its purpose only if the behavior of the great majority of students is channeled toward appropriate goals. If each child were to talk and move about as he pleased, the overall effect would be chaotic. Thus, children in a classroom situation must remain reasonably silent except when they are permitted to speak, and must remain in their seats unless they are excused. This situation contrasts with the family environment of the preschool child who, at home, is much freer to pursue his own interests and activities. The classroom situation is one where the norms of behavior are clearly defined, and where regular routines are established. The needs of each individual are subordinated to those of the others.

Although an increasing number of males are entering public school teaching, in the 1965-66 school year, 7 out of every 10 teachers were female, with the greatest proportion of females in elementary schools (NEA Research Bulletin, 1967). The teacher in the classroom is a dominant and controlling figure, by virtue of her authority and superior knowledge. She transmits the norms for correct behavior and enforces various rules and regulations. She governs routine classroom functions. Her role as disciplinarian may be reinforced or weakened by the other children in the classroom. She may enlist their aid in censuring those pupils who step out of line. On some occasions, however, her pupils may unite in opposition to her. For example, they may laugh along with the disorderly pupil whose antics are disrupting classroom order.

In the classroom, emphasis is placed primarily upon verbal skills and, as the child progresses through the grades, quantitative skills receive an increasing emphasis. Although other abilities receive some attention, such as motor coordination in handwriting, perceptual skills in art, and vocal skill in music, these occupy a minor proportion of the child's classroom day.

Social activities in the school situation also have an important relation to educational achievement. Physical aggression is condemned by school authorities, both in the classroom and on the playground. At the same time, athletic skills are highly valued, particularly in boys, by the school and by the children. Boys who are outstanding in this respect are apt to be admired by the other children. In social interaction in the classroom, behaviors that contrast with energetic physical action are apt to be emphasized. The female teacher is likely to stress restraint, politeness, and harmony.

Family and Educational Achievement

Certain general processes that operate in the family situation to shape the attitudes and behavior of the child are discussed elsewhere in general textbooks on social psychology, and will be reviewed only briefly here (see, for example, Chs. 17-19 of Secord & Backman, 1964).

Parents and older siblings serve as models for behavior patterns that are appropriate to the cultural group to which they belong. If they are members of our own society, for example, their behavior is apt to exemplify the value of material possessions and the importance of competing with other persons for wealth and position. Parents also sanction culturally approved behavior. When the behavior of a child deviates too radically from accepted patterns he is apt to be punished. Similarly, he is rewarded when he adopts acceptable patterns of behavior. Such sanctions are used, for example, to teach the child proper table manners.

In a modern, highly developed society like our own, values and behavior patterns differ from one subgroup to another. They vary by social class, by rural or urban residence, and by geographical regions of the United States. Thus, each family represents the cultural values and behavior patterns of the subgroup to which it belongs. While some cultural elements are common to almost every family, many are specific to their own subgroup.

In addition to modeling and reinforcing appropriate behaviors and values, the family mediates culture in another manner: by filtering and interpreting the values and behaviors of subgroups differing from its own. In our highly mobile society, the child is frequently exposed to such groups, not only in actual contacts, but especially through such media as television and movies. Although this broadens his experience somewhat, to some extent the family limits this broadening by interpreting these outside experiences for the child so as to reinforce the culture patterns of the subgroup to which it belongs.

In recent years interest in the impact of various subcultures on the educational process has greatly intensified. Most notably, the increasing urbanization of our society with its attendant increases in the size and number of underprivileged urban groups has made the problem of educating the deprived child a dominant one. Ambitious research programs on the impact of subcultures on the educational process are now under way, and ultimately should greatly increase our knowledge of this topic. A review of our present state of knowledge is useful, however, in providing a tentative set of principles as a basis for action and for further research. We will first consider the impact of family socialization practices on the initial adjustment of the child to the school situation and, in later chapters, discuss how the educational process is affected by the peer group and by the culture of the school.

Unfortunately, much research attempting to relate the home environment of the child to his school achievements, partly because of its newness and partly because of the failure of investigators to apply well-known experimental and statistical controls in their work, fails to yield unimpeachable conclusions. The most common problem is that of demonstrating that an antecedent variable or condition is causally related to educational achievement. This problem arises because, by itself, the demonstration of an association between two variables in a non-laboratory setting does not imply a cause-effect relation. Often the association between the two variables may be a function of the correlation of each with a third variable. An example may clarify this point.

Suppose that one wished to discover whether an intellectually stimulating environment in the home produced a higher level of educational achievement. Quantitative data might be obtained on such items as the number of books and quality magazines in the home, the presence of one or more encyclopedias, the extent of discussions between adults and children that could be characterized as intellectual in character, etc. Such data could be correlated with educational achievement, testing the hypothesis that a positive association exists between the intellectual level of the home environment and achievement in school. Unfortunately, even if a very high association were found, this information by itself would not demonstrate that the home environment determines the level of educational achievement. Various noncausal explanations of this obtained correlation may readily be imagined. Two examples are:

1. Families with larger incomes undoubtedly can afford to purchase a larger number of books and have more space for them in their homes. Such families also live in more expensive residential locations where the schools are better supported financially and thus are more effective

in educating children from these families.

2. If we assume that educational achievement is at least in part accounted for by inherited characteristics that relate to intelligent behavior (a viewpoint currently under vigorous attack, but not yet convincingly refuted), another explanation of the obtained association between intellectual level of the home and educational achievement could be simply that intelligent parents buy more books and also, for genetic reasons, have children who are more intelligent and who consequently perform well in school.

Methods of analysis are available for ruling out alternative interpretations that otherwise make it extremely difficult to draw any convincing conclusions concerning the findings of such research (Kendall & Lazarsfeld, 1949; 1966), but these methods have seldom been used in educational research. One of the simplest and most commonly used procedures is to make comparisons within subgroups equated on the unwanted variable or variables. For example, if the positive correlation between intellectual level of the home environment and educational achievement drops to zero when only those children whose parents have the same performance on an intelligence test are considered, the original correlation may be considered spurious. If, on the other hand, the positive association is not diminished by such an analysis, the genetic explanation may safely be ruled out. One difficulty with this method is that each of many plausible alternate explanations must likewise be eliminated before much confidence may be placed in the obtained correlation, and another problem is that large numbers of persons must be included in the sample.

Many characteristics of the family are apt to affect the educational achievement of children. Among these are the value and meaning it attaches to education, the pressures parents create toward achievement, the extent to which the home environment stimulates intellectual development, the language model provided by the adults in the family, forms of discipline and control used by the parents, the academic guidance they provide, and the extent to which the home situation facilitates desirable work habits.

Before proceeding further there may be merit in describing at least briefly some important theoretical notions concerning the development of the child's ability to use concepts. As part of a sophisticated theory, Harvey, Hunt, and Schroder (1961) have described a dimension called concreteness-abstractness. In a favorable life situation, children are thought to progress through four stages from an initial one where concepts are concrete to a final one where they are abstract. In many instances, however, the behavior of socializing agents operates adversely to interfere with progression to the next stage or to fix conceptual development at one of the earlier stages.

At the initial stage, which is the most concrete, evaluations of things or events are good or bad, black or white. Action is guided by strong dependency on authority. Ambiguous situations are disturbing and require resolution even at the risk of oversimplification. Difficulty is experienced in seeing alternate routes to the same goal. The capacity to "act as if," to assume the role of another person, or to act in terms of a hypothetical situation has not been developed. The self is less well-defined, and less apt to be perceived as a causal agent in behavior sequences. Abstractness, on the other hand, is represented by the opposite of these characteristics.

The following are the four stages of this developmental sequence.

Stage I. Concrete conceptual functioning results from training conditions in which the parent exercises complete or near-complete control over the child. The parent sets a rather rigidly prescribed path for the child to tread without explaining the reasons and values associated with this particular behavior. A child in this stage may be expected to be strongly dependent upon authority, to require highly structured situations, and to approach problems in a narrow, stereotyped fashion.

Stage II. Functioning here is still largely concrete, but the parent is more unpredictable and capricious in his demands and in administering rewards and punishments. Clear routes of attainment of rewards are not perceived; the child rebels against external authority and is negativistic. Self may be somewhat better differentiated because of the need to rely on his own resources.

Stage III. Rules and external authority are not so influential in this stage. The behavior of the child is determined by a reciprocal relation between himself and his parents. He develops some sensitivity to the desires of his parents and adapts to them, just as they adapt to his needs, and this contributes to understanding of self. Frequently, however, this reciprocation is not balanced, and either the parents' or the child's needs are the center of focus. The former results in overdependency, and the latter, in parental overprotection. Overdependency is associated with a passive approach to learning and with lack of creativity and originality, while overprotectiveness deprives the child of practice in coping with problems.

Stage IV. Parent and child have a task orientation to situations. This occurs because the child has gained rewards through his own exploration rather than by matching his behavior to criteria set by the parent.

His evaluation of self is positive, and based upon successful achievement. Thus, he has an open-minded approach to problem-solving, and is accepting of new ideas.

Although the foregoing brief treatment of this theory cannot possibly do justice to it, these main outlines of the concreteness-abstractness dimension will prove to be helpful in organizing thinking on our main problem: the effects of family socialization processes on educational achievement.

The extent that parents directly pressure their children toward achievement in school and toward other valued achievements is often thought to be an important determinant of the child's success in school. Studies on this point are conflicting, however. Some find a direct association between the amount of pressure toward achievement exerted by parents and the amount of actual achievement by the child. Others find zero relationships, and still others, negative relationships.

For example, a recent investigation of 60 families having children in the fifth grade measured achievement press using intensive interviews with each family. Questions asked pertained to parental aspirations for the education of the child, the parent's own aspirations, parental interest in academic activities, direct pressure for achievement in school, rewards for educational achievement, knowledge of the educational progress of their children, and the preparation and planning for the attainment of educational goals (Dave, 1963). An overall measure of this parental achievement orientation correlated .74 with the child's achievement in school. The higher association found here, compared to most studies, may in part be due to the breadth of the measure of achievement press, which to some extent may be contaminated with the dependent variable, educational achievement. For example, one question pertained to parent's knowledge of their children's progress in school. But when children do outstandingly well, or do very poorly, parents may become especially aware of this: the exceptional performance is thus antecedent to the parent's knowledge rather than the other way around.

Another study of 40 early-grade school children and their fathers and mothers found no relation between the value the fathers and mothers placed upon their children's intellectual performance and the children's observed performance. Furthermore, encouragement of and participation in intellectual activities with the child by the parent was negatively associated with the children's school performance. A recent study suggests that only certain types of pressures are related to educational ambitions (Cohen, 1965). Two groups of 50 working-class families each were assembled. Sons in one group had decided to attend college upon graduation; sons in the other had not. The two groups of boys were matched on intelligence and on community residence. Although parental planning and encouragement for their son's future was much more prevalent in the college-bound group, there was little difference between groups in more direct, immediate parental pressures, such as might be expected in response to poor grade reports. At this stage of knowledge, we may conclude that directly encouraging children to succeed in school does not necessarily improve their performance--a conclusion that many parents have ruefully arrived at through their own experience.

One reason why such studies do not yield consistent results is that parents' attitudes toward their children's school achievements must also be considered in combination with the characteristic means they use to control and train their children. Very probably identical parental attitudes toward education have different effects depending upon the disciplinary techniques they use. Many studies have shown that types of discipline exercised by parents are related to children's school achievements, although these results have not always been consistent with each other. A review of such investigations by Crandall (1963) notes that early studies found that positive parental attitudes toward the child (such as high interest in him, closeness to him, understanding and approval of him, etc.) were associated with achievement in high school. He points out, however, that various methodological inadequacies of these investigations undermine confidence in this initial conclusion. More recent studies reviewed by him agree in demonstrating that negative parental behaviors, such as rejection, coerciveness, and overprotection relate to high achievement. The research also suggests that somewhat different behaviors on the part of the father and the mother toward boys and toward girls produce optimum academic achievement. Training the child to be independent at an early age, initially thought to be positively related to achievement, in a more recent study appears to be negatively associated (Chance, 1961). Mothers who accept and foster dependence have children who do better in school.

One possible explanation of these conflicting results may be that the relation between parental stress on academic achievement and the child's actual progress in school is curvilinear. Too little or too much stress may lower academic achievement; a moderate amount may yield optimum performance. A parent who is too critical and demanding and too sparing of praise and support is apt to produce discouragement and negative attitudes toward school, while one who is indiscriminately supportive probably fails to motivate his child toward achievement. Certainly clinical studies suggest that the school failure of some children is associated with overpowering parental ambitions, and of others, with parental indifference. Since the various investigations use different measures of parental attitudes towards achievement, it is difficult to assess whether they are at the optimum point or not. Another study notes that parental exhortations and standards of achievement are accepted only when the child identifies strongly with his parents (Argyle & Robinson, 1962). This condition is fostered by a warm nurturant relation between parent and child.

The limitations of studies using a cross-sectional design should also be noted. It seems probable that a persistent but reasonable positive attitude toward school achievement over the entire developmental period could correlate substantially with achievement even though, at any given stage, the correlation could be zero or negative. A longitudinal study of 140 boys and girls from the ages of 6 to 10 provides indirect support for this view (Kagan, et al., 1958). Children who had shown an increase in intelligence test scores over this period were shown to have higher need achievement imagery, more competitive striving, and more curiosity than those who did not show an increase. This is consistent if it is assumed that this striving behavior on the part of the children is associated with persistent parental stress on achievement.

The developmental theory of Harvey, Hunt, and Shroder (1965) suggests two other points. One is that the different stages of development undoubtedly call for somewhat different types of parental behaviors. Poorly timed use of wrong socialization practices at a particular age may well have undesirable effects, a result that can be assessed only through longitudinal studies. The second point is that some knowledge of the school situation is essential. A child who has a relatively concrete orientation, with heavy dependence on authority and a stereotyped approach to problem-solving may do well under an authoritarian teacher who makes use of drill and rote learning. The opposite would be the case for a child who has a more abstract style of conceptualization, stressing alternate approaches to solving problems and independence in learning.

Recently, Hess (1964) has suggested that differences among mothers in the way they teach their children to deal with the school system may have important consequences for learning. Mothers are characterized as having either a status orientation or a person orientation. The status-oriented mother stresses the difference in status and power between the teacher and child and encourages compliance and docility as proper ways of adjusting to the classroom situation. In contrast, the person-oriented mother is less apt to view the school as a remote, implacable authority, and consequently is less concerned with obedience. She attempts to acquaint her children with alternative types of behavior and the consequences of each, as well as with the purposes of various rules and behaviors. Status-orientation is thought to produce passive and docile behavior; person-orientation, active, inquiring behavior. In general, lower-class mothers express a status-oriented attitude; and middle-class mothers, a person-oriented attitude. These specific concepts closely resemble the dimension concreteness-abstractness, with the status-oriented mother tending to produce a concrete conceptual system in the child, and the person-oriented, a more abstract system.

Another aspect of the home that might be expected to relate to educational achievement is the suitability of the home environment for the development of cognitive skills. Deutsch (1963) believes that the home environment in depressed urban areas is especially deficient in this respect. Living space is small; the number of people occupying a given space is large. The noise level is apt to be high, with continual strains resulting from the conflicting needs of individuals occupying a small space. Thus, privacy and freedom from distraction are rare. Magazines, books, toys, puzzles, pictures, furniture and similar objects are relatively scarce in the home, creating a somewhat impoverished visual environment.

While it is logical to assume that such environments should be less conducive to cognitive growth, it is not easy to produce conclusive evidence that this is the case. Experimental animals raised in severely restricted environments have at adulthood frequently shown deficient performances as well as emotional disturbances, but control animals given brief daily experience in normal environments and restricted the rest of the time perform normally as adults. Of course, generalization from animal studies on this issue is hazardous, for the child's learning during the preschool period is enormously complex compared to that of the rat or chimpanzee.

Another variable is the sheer amount of interaction between parent and child. Deutsch (1963) has noted that this is greatly reduced in many depressed area homes. Often the home has no father, and the mother must fill two roles: that of breadwinner and responsible caretaker for the family. The larger number of children to be cared for in such families also reduces interaction between parent and each individual child. This reduced interaction produces, in effect, less intellectual stimulation of the child. Some support for this view is found in a report demonstrating that children from fatherless homes have significantly lower intelligence test scores by the time they get to the 5th grade (Deutsch & Brown, 1963). The interaction hypothesis is further supported by several other findings: First, within a social class level, the larger the family, the lower the intelligence test performance of the children (Scottish Mental Survey, 1953, 1964); second, the eldest child in a family tends to have a higher IQ--he had the greatest opportunity to interact with parents before his siblings arrived (Lees & Stewart, 1957). Third, twins have lower IQs than only children (Gille, et al., 1954; Nisbet, 1961). Fourth, the IQ of children well-spaced in age within the family is higher than the IQ of children more closely spaced (Tabah & Sutter, 1954). All of this evidence suggests that a lower volume of interaction between parent and child results in lowered intellectual performance.

Perhaps the most important aspect of this interaction for intellectual growth is the verbal communication that takes place. Certainly interaction among humans is largely verbal in nature and school learning in particular is heavily dependent upon language skills. The interaction hypothesis just discussed suggests that the lower-class child is especially apt to be retarded in verbal development. Supporting this is the finding that the negative correlation between IQ and family size is greater for verbal than for nonverbal intelligence. Several other studies indicate that among British working class families, verbal intelligence is markedly depressed with respect to nonverbal intelligence (Bernstein, 1958, 1960; Venables, 1959).

Along similar lines, Bernstein has argued that language differences among the social classes are not simply a matter of vocabulary or more proper use of grammar, but rather, middle-class and working-class families use different modes of speech, each appropriate to their life situations. He terms these the restricted code and the elaborated code (Bernstein, 1965). In terms of content the restricted code pertains to easily predictable, ritualistic modes of communication such as would occur in interactions that are strongly governed by clearly understood rules. Examples are superficial exchanges between strangers who have just met, or a mother telling her child bedtime stories that they both know by heart. In terms of structure, the restricted code is relatively simplified, with little expression of intent. This stems from a social relation of an inclusive kind, based upon a common, extensive set of closely-shared identifications and expectations self-consciously held by the members. Individual feelings will be conveyed primarily through nonverbal means. Meanings are likely to be concrete, descriptive, or narrative, not analytical or abstract. The prototype of a restricted code is illustrated in the jargon used by adolescent peer groups, prison units, and military units.

Speech in an elaborated code is tailored more precisely to specific situations; the speaker is apt to modify his speech to fit the special conditions and attributes of the listener. There is greater sensitivity to nuances and differences of meaning; the intentions of the speaker and the listener are taken into account.

These conceptualizations of Bernstein fit fairly well the concreteness-abstractness dimension previously mentioned. In fact, Bernstein's emphasis on language has in common with the Harvey, Hunt, and Schroder theory a central stress on the development of different conceptual systems.

Although middle-class children are found to use both restricted and elaborated modes of communication, depending upon their appropriateness to the situation, most lower-class children know only the restricted mode. Since the school situation and the teacher require an elaborated code of communication, the lower-class child may be expected to have difficulties in the classroom. He is apt to have little motivation to extend vocabulary and to use words in new ways, because he does not understand the mode of communication required. Although the restricted mode is compatible with learning through rote memory and drill, it creates difficulties in generalizing from the specific content that is learned and in grasping abstract principles so typical of school learning (Bernstein, 1961).

Following up upon the work of Bernstein, Shipman and Hess (1965) have studied the use of language by 163 Negro mothers and their four-year-old children from four social class levels. They conducted intensive interviews with the mothers in their homes and administered several mother-child testing situations at the University of Chicago. They found that when the mother used a status-oriented, restricted mode of communication, the child was less apt to weigh reflectively alternative modes of action and to attend to the individual characteristics of a situation. Those mothers who used an elaborated code produced in their children a cognitive style more amenable to problem-solving behavior. As in England, the elaborated code was more typical of higher class levels, and the restricted code, of lower-class levels. Class variation in these communication modes appeared to be greater than would be expected on the basis of the obtained intelligence test differences from class to class.

Deutsch (1965) reports a study involving a core sample of 292 children including Negro and white and middle- and lower-class children, and first- and fifth-grade children. Over 100 variables concerned with home background, language functioning, conceptual behavior, intelligence test performance, reading, general orientation, self-systems, and related factors were assessed by means of tests and other techniques. Three language components of especial importance were labeling, which involves learning coded designations for objects and events in the child's environment; relating, which involves fitting together the names of objects with descriptive modifiers into meaningful wholes; and categorizing, which involves grouping objects or events into schemes on the basis of some conceptual framework. These ideas appear to range from concreteness to abstractness in the sense discussed earlier.

Clear differences in performances on the tests related to these language components were found at the first-grade level between lower-class and middle-class children. Some racial differences were also found, but most of these were simultaneously associated with social class differences. At the fifth-grade level, similar differences in performance were found, except that minority group status was associated with deficiency in language skills to a greater extent than at the first-grade level. This supports the cumulative deficit hypothesis: when four years of school experience are added to a poor home environment and minority group status, children are increasingly disadvantaged in language skills and intellectual tasks.

In conclusion, several general criticisms of the research in this area may be noted. One is that all too many studies are cross-sectional in nature and all too few are longitudinal. It seems probable that a persistent but sensible, positive attitude toward achievement on the part of parents over the entire developmental period would correlate substantially with achievement, even though at any given stage the correlation could be zero or even negative. In addition, different stages of development undoubtedly call for somewhat different types of parental behaviors.

Second, a particular mode of child-rearing may have facilitative effects upon academic performance at one age but at another, the same parental behavior might be detrimental to academic performance. Thus, if we are to reconcile differences among various studies, we must not throw studies of children of different ages all in the same computer for analysis. A third point is that some knowledge of the school situation is essential if academic achievement is to be predicted from knowledge of the home situation. Child-rearing practices cannot be considered in isolation from the school situation. Analysis of what goes on in the classroom, in terms of the relation between teacher and pupil, is necessary, and it must be compared with what goes on at home between parent and child. For example, in the research on interpersonal styles by Hess just discussed, it seems to be assumed that status-oriented interaction between mother and child will somehow be incompatible with the school situation but that person-oriented interaction between mother and child will be compatible. But how is this known without carefully studying the school situation? Anyone familiar with the atmosphere in public schools is aware of the considerable amount of control and discipline exerted in the school and classroom, and of the authority-oriented nature of much interaction. In view of this, perhaps interaction between mother and child that is oriented in terms of status and authority would be more compatible with the school situation than a person-oriented style of interaction. Even more likely is the possibility that some midpoint between the two extremes of status-oriented interaction and person-oriented interaction would best prepare the child for competent performance in the school system.

If this is so, it means that extensive studies must be undertaken to discover the frequencies of different interaction styles between parent and child and teacher and pupil. Only after this has been done in both settings can the effects of the home on the school be understood.

Section 2

DIVERGING PATTERNS OF ACHIEVEMENT

The previous section focused upon the home environment and the factors within it that appear to have the largest effect upon mental development and performance. Naturally these influences continue as long as a student remains in school, but their relative importance and also the manner in which they operate might vary greatly at different educational levels. The present section will focus upon the role of the student from the beginning to the end of his formal education, examining in some detail the many factors that turn him in one direction or another during this long period. The role that one will assume as an adult often has an important connection with the paths that the student has followed during his education; our analysis will attempt to show how expectations for this future role affect the direction a student takes at many choice points in his movement through the educational system. Similarly, the nature of the school system at different levels, the values of the peer group, and the behavior of his teachers may be expected to affect the progress of the student.

Family Variables

We noted earlier that children in the lower social classes are apt to get off to a poor start in school. Interaction between parent and child is greatly reduced in many depressed area homes. Often the home has no father, and the mother must be away at work much of the time.

The larger number of children in these families also reduces interaction between parent and each individual child. This results in less intellectual stimulation of the child. We have also called attention to the probable difference in language training in lower-class homes, training that is apt to place the child well behind the starting post when he first begins school.

Other family circumstances have been identified as contributing to withdrawal from school in the high school years. In a study of the dropout, Cervantes (1965) stressed the failure of his family to function adequately as a primary group. Contemporary sociologists identify three characteristics of the primary group: (a) relations that are personal rather than impersonal--they involve the whole person; (b) communication that is deep and extensive; and (c) the provision of satisfying, happy experiences (Broom & Selznick, 1958). Studies of dropouts indicate that their families fail to meet all three of these criteria. In one study, four out of five dropouts stated that their family had little understanding of them, while four out of five students who graduated indicated that their families understood them (Cervantes, 1965). Similar sharp differences were found on interview questions pertaining to frequency of communication and marked but less extreme differences were found on the extent to which the family provided happy and satisfying experiences.

A further difference between the family of the graduate and the dropout lay in the friendship and kinship ties associated with the family. The families of the graduates had more ties to relatives and neighbors than families of dropouts; moreover, friends of the graduate were more often approved by his family than were friends of the dropout. This condition is apt to result in reinforcement of educational and other widely accepted values, a factor that keeps the student in school.

A study comparing the attitudes held by parents of students who dropped out with parents of those who did not, matched on socioeconomic background, further documents these points. Mothers of students who stayed in school encouraged their children's schooling and were acquainted with families whose children attended college (Mannino, 1962).

Although the thesis that the "youth culture" is cut off from the mainstream of society has strong support from many sociologists, the degree of this isolation apparently varies markedly for graduates and for dropouts. Families of the graduates were seen as maintaining considerable influence over them and, in fact, as being in agreement with them on many issues. Dropouts, however, isolated themselves to a greater extent: they chose friends in defiance of their families' wishes and in many instances engaged in open rebellion against their families (Cervantes, 1965).

The Individual Student

We may think of the individual child as gradually acquiring certain abilities, skills, habits, and attitudes that have some effect upon his school performance independently of the nature of the school he attends and of comtemporary influences stemming from his home situation. Our purpose here is to assess their relative importance in guiding the movement of the student through the various educational levels.

Since we no longer think of mental abilities as fixed endowments, but rather as a set of gradually acquired skills (Hunt, 1961), an initial poor start constitutes a handicap that may well attenuate subsequent learning. Many studies support the conclusion that the pattern of academic achievement is set early and few children improve once they make a poor start. Vane (1966) has shown that groups of children matched in intelligence and socioeconomic status but differing in initial achievement grow further apart in performance year by year. Another longitudinal study indicates that initial underachievers show a decrement in school performance from grades 1 through 12 (Shaw & McCuen, 1960). Moreover, Scannel (1960) found a correlation of .60 between fourth-grade achievement and the college success of 1500 Iowa students.

The most extensive study of educational achievement ever conducted in the United States further supports this conclusion in the case of disadvantaged children. It documents the point that Negro pupils, for example, are roughly one standard deviation below white pupils from grade 1 through grade 12 (Coleman, 1966). Since individual differences within a grade are increasingly larger at higher grade levels, this means that, if achievement is represented in terms of grade years, the gap between Negro and white widens from grade to grade. For example, at grade 6, Negroes in the metropolitan Northeastern United States are approximately 1½ years behind the average white pupil. At grade 9, they are approximately 2¼ years behind, and at grade 12, 3¼ years (Coleman, 1966). Next to Negroes, other minority groups showing performance decrements in lesser degree are Puerto Ricans, Mexican-Americans, and Indians. Oriental Americans are not deficient in performance.

While these data show clearly the differences in performance, they do not, of course, provide the reasons. Part of this increasingly poor performance with years in school is probably due to the poor start in the early grades caused by lack of preschool preparation in the home.

Children from many homes simply have not acquired certain necessary skills by the time they enter the first grade. Since learning in successive grades is built upon what has been learned initially, this poor start can have a long-range effect.

In part, the failure of disadvantaged children to keep up appears also to be due to the continuing influence of family background. Data from the Coleman (1966) report are illuminating. It has often been asserted that minority pupils do not aspire to achieve in school, aspire to a college education, or have ambitions for high-status occupations. For this reason, it has been suggested, they perform poorly in school. A 1964 study provides some support for the view that individuals from disadvantaged families have a low level of aspiration (Gottlieb, 1964). Rosen (1961), however, has presented evidence indicating that Negroes and whites have equal aspirations, but differ in their expectations of realizing these aspirations.

Recent evidence from the Coleman survey also shows that Negroes do not have lower educational aspirations. As many Negro as white pupils report that they would do almost anything to stay in school. Among the minority groups, only the Puerto Ricans are less inclined than whites to remain in school. Further, a considerably higher proportion of Negroes than whites report that they want to be good students. Negroes also aspire as much as whites to education beyond high school, although often their choice is not of a four-year college, but a technical, nursing, or business school. These high aspirations for education are matched by high aspirations for occupational achievement. The largest category of occupation chosen by all groups is professional--an unrealistic aspiration for all students, including the whites, since only about 13 per cent of the total labor force is currently so employed. These findings indicate quite clearly that the differential performance found among minority groups is not a matter of differences in aspirations.

Another common thesis is that disadvantaged children have low self esteem. They might feel that they could not perform at a high level in school tasks, and thus not put much effort into them. Ausubel and Ausubel (1963) provide some empirical support for this view. Once again, however, the Coleman report provides partly contrary evidence. Several questions were asked pertaining to self concept. In general, average differences between Negroes and whites were not found, although other minority groups had less favorable evaluations of themselves.

A third attitude that might be important has been termed fate control. Individuals vary in the degree to which they feel they have control over their own destiny. If a child believes that his environment is capricious, or random, or beyond his ability to change, he may conclude that attempts to affect it are not worthwhile, and stop trying. This would seem to be a relevent variable, because minority groups in fact do have less control over their own destinies.

A 1963 study indicated that lower-class children see themselves as more externally controlled and less capable of determining what will happen to them than middle-class children (Battle & Rotter, 1963). Haggstrom (1964) has suggested that poverty produces a feeling of powerlessness that pervades much of the individual's activities.

The Coleman survey measured fate control by means of the following three questions:

1. Agree or disagree: Good luck is more important than hard work for success.

2. Agree or disagree: Every time I try to get ahead, something or somebody stops me.

3. Agree or disagree: People like me don't have much of a chance to be successful in life.

On all three items, Negro and other minority children showed a much lower sense of control of their environment than did whites. Moreover, for whites, self concept was appreciably related to academic achievement, and fate control had only a weak relation; for Negroes, on the other hand, fate control had a strong relation to achievement, and self concept, a weak relation. Thus, it appears that home, neighborhood, and peers, if they are the major source of this notion of fate control, produce an orientation toward life among minority groups which is a strong handicap to educational achievement.

School Characteristics and Educational Achievement

We have indicated that informal preschool training occurring in the home is important in determining the start a child gets in the first grade, and that the kind of start he makes may have a lasting effect upon his performance. This suggests that the school often does not compensate for inadequacies of the home or of early training. Evidence discussed below indicates that this is indeed the case.

In part, of course, poor performance is perpetuated because the disadvantaged child is apt to attend a primary school where teaching competence is low, and where a disproportionate amount of time is spent in disciplinary functions. Even more important is the presence in school of peers who are disadvantaged themselves. The Coleman report has shown that the single most important factor in the school setting is the educational background and aspirations of the other students in the school. A child with a poor family background is unlikely to improve if placed in a school with peers similar to him. If, however, he attends a school where other pupils have better backgrounds and higher aspirations, he is apt to improve markedly. This effect is less for white pupils than for all other minority groups except Orientals. Furthermore, white pupils from a home that is strongly supportive of education who attend a school where most pupils have lower abilities and aspirations, nevertheless do as well as if they were in a school surrounded by pupils like themselves.

Controlling statistically for socioeconomic background enabled the effect of school facilities on performance to be assessed independently. In general, the Coleman report found that such characteristics as well-equipped laboratories and libraries produced relatively little difference in the average achievement levels of students enjoying these advantages, compared with students in schools less well-equipped, *when their achievement scores were adjusted for differences in socioeconomic background*. Worth noting is that school facilities had more of an effect on the achievement of minority pupils than it did on that of white pupils. Thus, in the Southern United States, where Negroes often attend especially poor schools, variation in school characteristics accounted for a larger proportion of individual differences in pupil achievement than it did in other parts of the country. Another caution in interpreting these results is that pupil achievement is reported only in terms of standardized tests, and it is quite possible that school characteristics might differentially affect achievement measured in other ways, as well as other aspects of the pupil's development.

The teacher is also apt to influence educational achievement of her pupils, in a variety of ways. In the Coleman survey, teacher competence was measured crudely by the teacher's own verbal test score and the educational background of herself and her parents. Teacher "quality" in this sense was found to have an appreciably greater effect on pupil achievement than school facilities. Moreover, this effect was intensified in the higher grades.

Given the teacher's goal of imparting knowledge and producing intellectual competence in her pupils, it is almost inevitable that she would be prone to favor high achievers and look unfavorably at low achievers. Many observers have also pointed out that if she is from the middle-class, she will be more accepting of behaviors exhibited by middle-class children and less approving of behaviors of lower-class children. A particularly well-designed study carried out in Britain supports these views (McIntyre, Morrison, & Sutherland, 1966).

A statistical analysis of teachers' ratings of their pupils on 25 traits indicated that the consideration most important to them might generally be described as "being a good pupil." This was demonstrated by the emphasis placed on such traits as trustworthiness, attentiveness, courtesy, pleasantness, and attainment in school subjects. A second consideration, much less prominent in the ratings, concerned sociability and leadership.

Separate analyses of the schools according to social class indicated some interesting differences in the way teachers in these schools assessed their pupils. In general, teachers in middle-class and mixed-social-class schools favored the pleasant and trustworthy boy; in suburban working-class schools, the clever boy; and in urban working-class, the boy who was attentive and hard-working. Girls were perceived in more stereotyped and less analytic fashion and more similarly no matter what the class level of the school. The "ideal" girl was conceived in much the same way whatever the social class background, while the "ideal boy" appeared to vary according to his social class origins.

Teachers varying in age also differed in what traits they stressed. Older teachers were more toughminded and conservative; they stressed attainment and such associated traits as persistence and enthusiasm; while younger teachers stressed good behavior to a greater extent.

Studies carred out in the United States yield somewhat similar conclusions, although in many instances they are less comprehensive and thorough than the investigation just described, and conclusions must be much more tentative. One study, for example, indicated that lower-class pupils found middle-class teachers more difficult to understand than lower-class teachers (Jackson & Fuller, 1966).

These variations in the way teachers perceive and behave toward pupils of different social class origins are apt generally to reinforce the handicaps or benefits that the pupil derives from his class origins. Pupils from the lower classes are apt to be seen as having less capability and as limited in what they might achieve, and conversely for those having a more advantageous home background. Moreover, the more favorable attitude that teachers have toward middle-class pupils because of the greater pleasantness and cooperativeness is apt to encourage them toward greater achievement and toward continuing education.

Ability Grouping and Streaming

One aspect of schools has been saved for a separate discussion, namely, various systems of grouping children according to their ability, especially in the primary grades.

This practice of grouping is perhaps most widespread in Great Britain, where it is called "streaming," although most urban schools in the United States also exercise some form of grouping. In recent years, educators and behavioral scientists have been taking a second look at streaming and its effects. More and more evidence is turning up concerning certain unfavorable consequences of this practice. First, it is apparent that the decision to place a child into a particular ability group is based only partly on ability and partly on social class origins. Jackson (1964) notes that in 140 British schools having two ability groups, three-quarters of the pupils having fathers in professional or managerial occupations were in the A group, and only one-quarter in the B group. Of those pupils whose fathers were unskilled manual laborers, only two-fifths were in the A group, and three-fifths in the B group. Similar social-class distinctions were found in over 400 other schools having three or four ability groups.

A study by Douglass (1964) makes clear that such placement by social class is not in proportion to the abilities of pupils in each occupational category. He found that 11 per cent more middle-class children are allocated to the upper streams than would be expected from their measured ability at eight years of age, and 26 per cent fewer are placed in the lower streams. This undoubtedly underestimates the social class bias, since test performance at age eight has probably already been influenced by the two years spent in a particular ability group. The same study also indicates a strong bias in placement as a result of preschool maternal care. Dirty, badly clothed children appear in the lower groups to a considerably greater extent than their test performance warrants.

Finally, the British studies in particular show marked social class differences in the number of dropouts and in the number of pupils who go on to the highly desirable "grammar" schools. In the upper-middle class there were 14 pupils in grammar schools for every one in a technical school, whereas in the lower-manual-working class, there were only two pupils in grammar schools for every one in a technical school. This distribution is, of course, considerably out of proportion to the differences in ability between the two classes (Douglass, 1964). Similarly, those having left school at fifteen years of age varies from 15 per cent in the upper-middle-class families to 77 per cent in the lower-manual-working class, a difference that is not explained solely by the difference in ability.

Once a child is placed in a particular ability classification, he is apt to remain there. Vernon has estimated that on the basis of normal shifts in intelligence test scores, about 40 per cent of the children in the various groups ought to be transferred from one group to another (Jackson, 1964). But the actual rate of transfer ranges from 1 to 5 per cent. Thus, once placed in a low ability grouping, the educational opportunities of most children are apt to be permanently reduced.

While it is true that types of grouping differ markedly in different school districts, and thus have somewhat different effects, it appears clear that certain general conclusions can be drawn concerning the consequences of streaming. One British study compares grouped and non-grouped primaries (Jackson, 1964), another covers a large number of British schools having streaming (Douglass, 1964), and a third compares two systems of grouping (ability vs. random with enrichment) in a school district in the United States (Borg, 1966).

Unsegregated schools or those having random grouping were not found to be especially disadvantageous to the superior pupils. Superior pupils in ungrouped or randomly grouped schools made about as much academic progress as their counterparts in streamed schools. In the United States, ability grouping did not seem to result in greater achievement (Shores, 1964). In the British studies, however, pupils of average and of low ability made much greater gains if they were in the upper streams than they did in the lower ones. In schools where streaming was practiced, the gap in academic achievement test scores between the ability groups widened year by year. Such gaps were much smaller in ungrouped schools.

Ability grouping has consequences that extend far beyond academic achievement. Teachers in systems with streaming are apt to develop more rigid opinions concerning individual differences in children; they divide them into types; the bright, the average, and the dull. Moreover, these are thought of as enduring attributes of the children, as immutable, unchangeable, unassailable. That these attitudes do much to make the prophecy implied by the initial placement come true is suggested by a study demonstrating that children of equal ability perform at different levels if their teachers are led to adopt different expectations for their performance (Rosenthal & Jacobson, 1966). A further consequence is that teachers of low ability groups may feel that they too have been "grouped," lowering their morale and efficiency (Tillman & Hull, 1964).

Jackson points out that the streaming process controls friendships and tightens the groups further, perhaps reinforcing the different performance levels. He notes a considerable social difference between streamed and unstreamed schools. In unstreamed schools, children were more cooperative and helpful toward each other and toward the teacher, while the streamed schools emphasized competition. In the United States, Borg (1966) brings out clearly that the self concept of both the average and the slow pupil suffers markedly in schools where ability grouping is practiced. Pupils in randomly grouped classes had more favorable attitudes toward self, especially if they were girls, than those in ability-grouped sections. They also had higher self-acceptance. In addition, there were fewer pupils in the randomly grouped classes who were designated social isolates by means of sociometric tests.

Divergent Paths

The directions taken by various students become increasingly divergent as they move further through the educational system. In Britain, pupils in the upper streams of the primary grades move in greater numbers into the grammar school, the primary route to college and university training. Those in the lower streams, if they continue in school at all, go on to technical or secondary schools which feed only a small number of students into college or university training. Although there is more freedom of movement in the United States, student choices and counselor-direction often send students into a non-college or a college preparatory curriculum in high school. Not only does this leave them unprepared for college, but it is apt to orient them away from college through informal associations with other non-college-bound classmates.

Most of the research on student role-allocation has been devoted to the two most divergent role choices: dropping out of high school before graduation, and going on to college and graduate school. We will first discuss factors associated with dropping out of school before graduation from high school, and then follow the college-bound student into college, where, once again, he may drop out before graduation, or, at the other extreme, go on to post-graduate work and an advanced degree.

The high school dropout has become a problem of increasing concern not because more and more pupils are leaving school before graduating, but because the character of the labor market is changing. Automation and continued advances in technology require more trained workers and fewer untrained ones. In contrast to earlier times, there is little place today for the strong and willing but untutored laborer; thus, an ever-increasing proportion of the unemployed are non-graduates.

We have already noted that the families of the dropout are more disorganized and that they provide less support to his educational endeavors. Moreover, many dropouts have less respect for their families and are somewhat rebellious toward them. The pressures away from schooling are increased by their choice of friends. They are shown to isolate themselves to a greater extent, choosing friends in defiance of their families' wishes--friends who also turn away from the school (Cervantes, 1965). As might be expected, dropouts are strongly antagonistic toward school authorities and their teachers. Unlike those who eventually graduate, they have little regard for them and little respect for their opinions. They much prefer to consult their peers for advice--peers who themselves are pointed away from school (Cervantes, 1965).

Turning to the question of which students are college-bound, we refer back to Section I, where it was shown that family attitudes toward a college education and its occupational aspirations for the child have some relation to whether a student eventually goes to college. This is true whether families are classified according to socioeconomic level or whether more direct information is obtained concerning their attitudes and behavior toward the education of their children. In the present section we have already reviewed the effects of preschool experience in the family, early experience in the primary grades, and ability grouping. All of these earlier stages in the career of a pupil may have important consequences for his later education, as we have noted.

An additional influence not discussed previously concerns the impact of high school peers on an individual's decision to go to college. A variety of studies support the view that peers influence a high school student's orientation toward or away from college.[1] McDill and Coleman (1965) have presented evidence indicating that peer group status as a factor in college choice increased markedly during the four years of high school. Peer group status was defined in terms of membership in the leading crowd. A student was regarded as being a member of the "leading crowd" if two or more students identified him as such in a questionnaire. Among high school freshmen, their stated intentions of going to college are more strongly associated with their father's educational level and their parents' stated desire for them to attend college than with belonging to the leading crowd. Among seniors, however, being a member of the leading crowd is as strongly associated with their intention to attend college as is their family background. The effect of membership in the leading crowd on college orientation is strongest in those high schools where college-going is highly valued.

A plausible explanation of the effects of group status on college orientation is offered by the investigators. First, high status cliques are apt to have a majority of members who plan to attend college. They are more often students from well-educated families, and because of the orientation of their families toward college, most students in the "leading crowd" are apt to be college-oriented. Students in these cliques who initially did not plan to attend college are influenced by the values of the group to shift to a college-going orientation, so that by the senior year, a larger proportion of these high-status students are college-oriented.

Conversely, those with a non-college orientation who do not belong to the high-status cliques are more apt to associate with others having their own attitudes, and to be influenced further in the direction away from college. Such associations with students of like orientation toward college may perhaps be intensified by enrollment in different curricular programs leading toward or away from college.

The investigators also indicate that the college orientation of the "leading crowd" is not one of interest in academic studies, but rather the attraction of campus social life, freedom from parental control, college athletics, and other social attractions of college life. In high school, their admiration is directed toward the boy who is a star athlete and the girl who is popular. Being a brilliant student has rather negative connotations, being associated with conformity, good grades, and gold stars dispensed by teachers. In the high-status cliques there is a net movement away from scholastic achievement from the freshman to the senior year, in spite of the fact that plans for going to college are strengthened. For those outside the "leading crowd," orientation toward college is more often associated with a positive orientation toward scholastic achievement.

Occupational and Graduate School Aspirations

We may move on to consider the direction taken by the freshman who has entered college. A study of a sample of over 33,000 June college graduates which included questions concerning their future career choices and also choices that they had made earlier in their college days provides useful information concerning the magnitude and types of change that take place in college and gives some indication of influences that operated to bring about these effects (Davis, 1963; 1964; 1965).

First, an important point made by Davis is that, at the time of entering college, students are fairly well along in their career choices. The great majority know in general the kind of subject matter in which they are interested and the type of vocation that they plan to prepare for. What changes take place are not extreme reorientations, but shifts to related fields. This is supported further by the fact that, even in the freshman year, there are strong relations between choice of field and such demographic characteristics as sex, social class, and academic performance; many of these relations still prevail in the senior year. This general conclusion concerning the definiteness of freshmen choices should probably be tempered by considering that such choices were measured only retroactively, as recalled by the seniors in the sample. Davis fails to note that such retroactive measures are apt to overemphasize consistency from the freshman to the senior year.

Over the college years, education and business gain the greatest number of adherents and have the lowest loss rates. The remaining fields lose a substantial proportion of those originally planning to major in them. Among these other fields, the social sciences, biological sciences, law and the humanities attract more than enough students to replace those they lose. Engineering, medicine, the physical sciences, and other professions show net declines from the freshman to the senior year. Factors associated with choice of selected major fields may be summarized as follows.

Choice of education as a field is associated with being female, not wanting to make a lot of money, wanting to work with people, being a Negro, being from a smaller hometown, being from a low socioeconomic class, and being Protestant. As might be expected, business is more often chosen by men, by students wanting to make a lot of money, and by students lower in academic performance. Other characteristics were not strongly associated with this choice. Medicine is chosen as a career by men more often than women. Among the men, wanting to work with people is associated with choosing medicine. In general, high socioeconomic status and high academic performance is also associated with choice of medicine.

Findings such as these indicate clearly that career choice has certain definite associations with various demographic and personal characteristics. In particular, this study emphasizes the point that, by the time they enter college, students are well along certain paths to occupational careers, paths that may have minor branches leading to closely related occupational fields, but that are apt to be lacking in connections to paths leading off in grossly different directions.

A recent study by Wallace (1966) has shown that the uncertainty concerning both curriculum and social activities experienced by the entering freshman is rapidly diminished through socialization by older students and faculty. The freshmen who, upon entrance, place a high value upon getting good grades, in a few months modify this attitude downward toward a position more congruent with that of their older classmates. In part, however, this may also represent a shift toward revision of unrealistic expectations concerning grades to a more realistic level of aspiration (Pervin, 1966).

Certain other adaptations to the academic aspects of college life are rapidly made. The freshmen learn from upperclassmen which courses are easy or tough, and become familiar with the idiosyncrasies of the specific instructors, choosing to enroll with those who have compatible modes of managing a course. Wallace cautions us not to identify grades wholly with intellectual achievement; it is possible for a student to acquire certain skills and knowledge not accurately reflected in grades. But in view of the fact that grades are used widely by the faculty in evaluating students and by graduate schools as criteria for admission, a student's orientation toward grade-getting has important consequences for his future career.

Orientation toward graduate school among college freshmen changes in a direction opposite to that of grade-getting orientation: the proportion of freshmen who aspire toward graduate school increases during the freshman year. The student's small circle of close friends appeared to share more closely with him his orientation toward graduate school than did his full circle of acquaintances. With respect to getting high grades, close friends were less apt than more distant ones to have similar attitudes.

Wallace also found that aspiration toward graduate school rose the most among freshmen who had low academic rank in high school and who were from lower socioeconomic levels. His data indicated that this rather surprising change occurs because graduate school aspirations are not based upon expectations of success, but rather upon the desire to be socially accepted by non-freshmen. To implement this desire, these freshmen adopt the attitudes of upperclassmen toward graduate school.

School climate also has some effect upon graduate school aspirations. Colleges with an academic or intellectual climate send a much greater proportion of their students to graduate school. Such climates are more apt to prevail at small, private, high quality institutions than at large, less selective public institutions (Davis, 1963). Although in part such schools may attract more than their share of talented freshmen who already have graduate school aspirations, both the student climate and faculty behavior further intensify these aspirations.

Footnotes

1. Alexander & Campbell (1964); Campbell & Alexander (1965); Haller (1960); McDill & Coleman (1963; 1965).

Section 3

CONCLUSIONS

The current view of mental abilities is that the structure of the environment and the nature of experience has a profound effect on the performance of mental tasks. This contrasts sharply with the traditional view that individuals are endowed by their genetic inheritance with a native capacity for general intellectual achievement that has very narrow limits and that cannot be modified by learning experiences. Although there is still some controversy over these two contrasting views, evidence for the more contemporary view continues to mount, and provides prevailing support for it.

The implications of this contemporary view of mental abilities are far-reaching. Traditionally, educational practices have been geared to the assumption that intelligence is fixed. This assumption underlies such practices as the following: not attempting to teach a child ideas that he "cannot" learn; waiting until a child is "ready" before teaching him specific material; assigning children to different ability groups and giving them a different education, according to their supposedly fixed abilities; organizing school systems so as to channel pupils varying in ability onto different tracks--the college-bound and the non-college-bound; discouraging innovative methods in education that might teach a child material that he could not formerly grasp; and many other procedures. The traditional view that abilities are fixed also has discouraged educational researchers from thoroughly exploring the effects of social and personal factors upon academic performance. While it is true that many studies have been carried out on these topics, the view that abilities are fixed provides a limiting, constrictive framework within which the research has been conducted.

But once experience is accepted as a prime factor in the development of mental abilities, most of these traditional educational practices can be sharply questioned. Educational innovation is encouraged, and the contribution of personal and social factors to academic performance receives much more attention.

This contemporary view of mental abilities also justifies a more intensive look at the preschool period. Bloom (1964) has estimated that about one-third of a person's total mental development takes place during this period. Because of this large differences in ability exist among children who enter kindergarten or the first grade. Thus, programs that attempt, through special preschool training, to bring disadvantaged children up to a par with more privileged children are fully justified by our current view of mental abilities. Techniques must be found for remedying the effects of a poor home environment, and research suggests that such techniques can be developed.

Although many aspects of the home environment have been identified as potential contributors to mental development, and in some instances supported by at least a little evidence, it is difficult at the present time to state with certainty the relative importance of these different factors. The relative extent to which the disadvantaged child suffers from parents who present an inadequate language model, from diminished interaction with parents (often there is only one in the home), from lack of intellectual materials in the home, from lack of proper attitudes toward school simply cannot be gauged from present knowledge. But probably this information conerning the relative importance of different factors in the home is not crucial to solving the social problem created by the disadvantaged child. A pragmatic solution will probably be achieved through experimentation with educational innovations that prevent deficiencies or correct them.

The preschool period is not the only source of difficulty of the underprivileged child, however. Not only do effects of the home environment persist into later school years, but many aspects of the school system have been shown to aggavate the problems of the disadvantaged child. Schools where such children predominate often have larger classes, poorer facilities, and poorly trained and less experienced teachers who do not have the bargaining power to obtain better positions. This is not only a problem of racial segregation in the schools. When a school is desegregated, parents who believe that their child's education is being weakened are apt to place him in a differant school. In general, the children who are transferred at the parent's option are apt to be among the more competent. This action further aggravates the quality of education at the desegregated school, because, as we have seen, a child performs best in schools where his peers are somewhat above him in ability. The education of the disadvantaged child will probably not be adequate until schools where such children predominate are made superior to the average school, in terms of the training and competence of the teachers, the teacher-pupil ratio, facilities, and appropriate curriculum and teaching methods.

A problem enduring throughout the educational career of the disadvantaged child is the weak support and poor atmosphere existing in his home with respect to educational achievement. One approach toward alleviating this condition would be to have schools in such areas play a much larger role in community and neighborhood affairs, involving parents as much as possible in community action and education.

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